Assessing Terminology:

There are several terms used regularly by assessors that are critical to the assessment process, but not generally known by the public at-large. Following are important terms to understand:

Arm's-length transaction: This is a term used to describe a transfer of property between a buyer and a seller that qualifies for use in a sales ratio study. In order to be considered arm's length the property must be exposed on the open market for a typical length of time. Neither the buyer nor seller is under duress to buy or sell. Both the buyer and seller are aware of the potential uses of the property and the transaction is made in cash or cash equivalency (financing). The interests transferred are free and clear of encumbrances; i.e., fee simple, absolute ownership.

Ratio: Otherwise referred to as assessment-to-sales ratio, this statistic measures the relationship between sales prices and current assessments. For example, if a property sold for $100,000, and the assessment was $90,000, the Ratio would be 90% for that property. The Department of Revenue Administration calculates the ratio for every arm's-length sale in every community over a year timeframe, arraying them from high ratio to low. The **median** point in the array of City sales is established as the ratio for the City for any given year.

The following sample includes four sales, with their corresponding assessment and ratio, followed by a table summarizing the data and showing the mean and median ratio. The median Ratio in this example is 92.2%.

Assessment = 300,000
Sale Price = 290,000
Ratio = 103.4% (Assessment divided by Sale Price)

Assessment = 220,000
Sales Price = 225,000
Ratio = 97.8% (Assessment divided by Sale Price)

Assessment = 325,000
Sale Price = 375,000
Ratio = 86.7% (Assessment divided by Sale Price)

Assessment = 80,000
Sale Price = 100,000
Ratio = 80.0% (Assessment divided by Sale Price)

Assessment	Sale Price	Ratio
300,000	290,000	103.4%
220,000	225,000	97.8%
325,000	375,000	86.7%
80,000	100,000	80.0%
Mean Ratio	(Average)	92.0%
Median Ratio	**(Middle)**	**92.2%**

Stratified Ratios: This is similar to the Ratio above, except that it looks to the ratio of each class of properties. This study looks for bias that may exist within the assessment base. These stratified ratios studies can be expanded even further. For example, studies will occur to see if older homes are assessed at the same level (ratio) as newer homes, ranches as compared to colonials, and location differences along with many other comparative studies.

***C.O.D*:** (Coefficient of Dispersion) While the Ratio measures the level of assessments, the COD measures equity in taxes **(proportionality)** amongst properties of equal value. The COD measures the variation of sales price to assessed value amongst a set of properties with like sales prices. The average difference (from the median sales ratio) is divided by the median sales ratio to arrive at a percentage (the COD). This is the most important statistic an assessor works with. According to the International Association of Assessing Officers (IAAO) the measure of equity falls into the following ranges:

Percent	Equity Measure
10% or less	Excellent assessment equity
11% - 14%	Good assessment equity
15% - 20%	Fair assessment equity
over 20%	Poor assessment equity

The following grid incorporates the COD calculation from the aforementioned sample:

Assessment	Sale Price	Ratio	Difference between ratio & median ratio
300,000	290,000	103.4%	11.23%
220,000	225,000	97.8%	5.56%
325,000	375,000	86.7%	5.56%
80,000	100,000	80.0%	12.22%
Mean Ratio	(Average)	92.0%	
Median Ratio	**(Middle)**	**92.2%**	
Average of the differences			8.64%
COD (avg. of differences divided by median)			**9.37%**

***PRD*:** (Price-Related Differential) This statistic measures the relationship between higher valued properties and lower valued properties, and their respective assessments. This statistic answers the question: "Is there a bias for or against lower or higher valued properties?" For example, a PRD over 1.00 indicates a regressive assessment base, or, that higher value properties are assessed at a lower ratio, conversely, a PRD under 1.00 indicates a progressive tendency, or, shows that lower value properties are assessed at a lower ratio than higher value properties. Ideally, this statistic should be 1.00, but IAAO recommends that the PRD fall between .98 and 1.03.

The following grid incorporates the PRD into the sample.

Assessment	Sale Price	Ratio	Difference between ratio & median ratio		
300,000	290,000	103.4%	11.23%		
220,000	225,000	97.8%	5.56%		
325,000	375,000	86.7%	5.56%		
80,000	100,000	80.0%	12.22%		
Mean Ratio	**(Average)**	**92.0%**			
Median Ratio	(Middle)	92.2%			
Average of the differences			8.64%		
COD (avg. of differences divided by median)			**9.37%**		
Total of Assessments		925,000			
Total of Sales Prices		990,000			
Weighted mean		**93.4%**	(Total assessments div. by total sales prices)		
PRD (mean / weighted mean)		**98.4%**	(Progressive Relationship)		